

# Reference: A New Paradigm

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## Abstract

Over the past fifty years, most discussions of reference by philosophers of language, although certainly not all, have been conducted following a set of assumptions that involve two paradigms: i) names name and refer; ii) descriptions denote and describe. Indexicals, would be a sort of hybrid. They don't establish a new paradigm but take elements from both paradigms: indexicals denote and refer. On our view, the case of indexicals has more radical implications, however. They constitute a substantially different paradigm for reference, that should change the way we think of names and descriptions, and, ultimately, sentences.

*Keywords: reference, role, indexical, name, description*

## 1 Introduction

Over the past fifty years, most discussions of reference by philosophers of language, although certainly not all, have been conducted in the following framework. (We use 'designate' as a general term, and 'reference' for cases Kaplan (1989) would call 'directly referential'; that is, cases in which the individual designated and not some description or identifying condition is contributed to the proposition expressed.)

1. Statements express propositions.
2. Whatever one's ultimate theory of them, propositions, can be usefully thought of as sets of possible worlds, those worlds in which the statement, with its meaning fixed in the actual world, is true.
3. Singular terms include proper names, definite descriptions, and pronouns. All of these, at least in paradigm circumstances, *designate* individuals: persons and other things.

4. Definite Descriptions designate the individual they denote, that is the individual that uniquely fits the descriptive content. The descriptive content, rather than the individual described, is contributed to the proposition expressed; descriptions do not refer.
5. Names name; that is, their meaning consists of a convention directly assigning them to an individual, the 'bearer' of the name. In thinking about names, the apparent fact that many people have the same name, can usually be left to one side (indeed, it is only an apparent fact, if one adopts Kaplan's theory of name individuation).
6. Context plays an essential roles in the case of pronouns. Many are indexicals or demonstrative ('I', 'you') or demonstratives ('this', 'that') or demonstrative phrases ('that man'), or personal pronouns used demonstratively ('he' and 'she'). In these cases, following Kaplan, a context should be considered as an abstract objects, a quadruple of agent, time, location and world. The relevant concept of meaning is *character*; a function from expressions-in-context to contents; propositions in the case of statements (declarative sentences in context), individuals in the case of referential singular terms, and other suitable objects for other kinds of expressions.
7. A different sort of context plays a role in the case of anaphora, where context fixes the anaphoric links among pronouns and other singular terms. The whole issue is somewhat messy, and on the whole best left to linguists and logicians.

## 2 Two Paradigms

This set of assumptions involves two paradigms of reference, names and descriptions, and a sort of hybrid, indexicals (Perry (2001)). The issues can be organized around two questions (Marti (1995)):

- Does the singular term denote or name? This is a question about the ‘mechanism’ of reference. Naming is the relation names, as standardly construed, have to their bearers; it is a matter of conventions, usually established, for people, by their families, and then passed on. Denotation is a matter of the meanings of the constituents of a complex expression, like a description or a possessive, providing an identifying condition, which the designated object has to fit.
- Does the singular term refer or describe? This question has to do with the propositional contribution. Terms that refer contribute the individual designated to the proposition expressed by statements that contain them, terms that describe.

For names and descriptions, the answers to these questions coincide. Names name and refer, while descriptions denote and describe:

	Name	Denote
Refer	Names	
Describe		Descriptions

Part of this coincidence is forced upon us: with names the mechanism of designation does not provide us with an identifying condition, so it’s not easy to see how they could describe. On the other hand, descriptions could in theory refer, contributing the denoted individual. That this sometimes happens, is one interpretation of Donnellan’s (1966) distinction between attributive and referential uses of descriptions. If we give referential uses a ‘pragmatic’ explanation, things seem to line up in a very natural way, and this perhaps explains why the distinction is often not appreciated.

Once we have made the distinction, however, it is natural to treat indexicals not as providing a new paradigm, but as sort of a mixture, picking up elements of the two paradigms. Indexicals denote and refer. The character of the word ‘I’ does provide us with an identifying condition, relative to context: the individual designated is the agent of the context. Indexicals certainly do not name; the conventions of language associate these words with characters,

not with individuals. On the other hand, as Kaplan convincingly argues, it is not the condition of being the agent that is contributed to the proposition expressed, but the individual designated. So we have:

	Name	Denote
Refer	Names	Indexicals
Describe		Descriptions

Given this analysis, the only thing truly new about indexicals is that they denote relative to context. The mechanism of designation for indexicals is basically that of descriptions, with the addition of this relativity; the propositional contribution is that of names.

### 3 Roles

On our view, the case of indexicals has more radical implications, however. They constitute a substantially different paradigm for reference, that should change the way we think of names and descriptions, and, ultimately, sentences. To appreciate the new paradigm, however, we digress for a bit and discuss roles.

A lot of our thinking is organized around roles. Key questions about an object of a certain kind are often organized around a set of characteristics and important relations things have to objects of that kind. Think of a realtor's summary description of house on the market. This will be a list of roles, relative to the house, and which objects play them: Address, # of rooms, square feet, type of heating, etc. In setting up tables or data bases, to handle information about objects of various kinds, we try to isolate key roles, so that the relevant information can be given by identifying the occupants of those roles. Kepa is giving a party! Then tell me the time, place, and type of party it is.

Three important operations are involved in roles: nesting, linking, and transferring.

Some examples of nesting. Riding your bike, you squeeze a brake lever; you thereby tighten the cable attached to the brake lever (that you squeeze); you thereby close the caliper attached to the cable (attached to the brake lever (that

you squeeze)); you thereby slow the wheel inside the caliper (attached to the cable (attached to the brake lever (that you squeeze))); you thereby slow the bike, resting and rolling on the wheel (inside the caliper (attached to the cable (attached to the brake lever (that you squeeze))). Roles allow us to keep track of things in a fairly easy way, suppressing variables and quantifiers that logical notation would require to express the same thing.

Linking comes in two types. The first involves one thing playing two different roles relative to the same object. In the present example, the same bike is both the bike ridden, and the bike braked. The link between the roles of being the bike one is on, and being the bike one slows by squeezing the brake lever by one's hand, is built into the architecture of bicycles, and a good idea it is! And of course the complex role-linking between being the lever squeezed and the bike brakes is architectural too; it falls out of the way brakes work.

The second kind of linking involves one thing playing the same or different roles, relative to different objects. If we have the same neighbor, one person plays the neighbor role relative to each of us. If my neighbor is your father, one person plays the neighbor role relative to me, and the father role relative to you.

Transferring involves the same object playing the same role, relative to different objects. We are riding bikes. You ask me how to slow down your bike. I squeeze the lever on my bike to show you. You learn that you can slow your bike by squeezing the lever on your bike.

When ways of nesting roles, and situations in which roles are linked, are architectural, as a result of the way Mother Nature or some other designer puts things together, the person who exploits them need not understand how they work. We are, as we say, attuned to the way things work, when we know what to do to get a certain desired result. I know that by squeezing the lever I can reach I can slow the bike I am on; doing the one is a way of doing the other. The linking and nesting is reflected in my knowing how to do things, not in my knowing why they work the way they do, or knowing how to describe it.

Moreover, the ways one has of doing things, may work over a wide range of

intervening mechanisms. I hop on the bike and ride, counting on stopping by squeezing the lever. The connection could be by cable, or hydraulic, or, these days, wireless and involving micro-computers. I don't need to know to use it, although I would certainly need to to repair it.

We plan, and interpret plans, in terms of roles. Typically objects come to our attention, in perception, through memory, through conversation. I see a pizza; I am accosted with a desire to eat it; I put it on a plate, and pick it up; I eat it. There is a sort of transcendental, or at least biological, linkage of roles at the bottom of all this; the roles of see-er, desirer, plate-getter, and pizza eater, are all played by me. Then there is the fact that the same pizza gets seen, desired, put on the plate, and eaten. The (imperfect) guarantee is not purely architectural, but based on my know-how; I know how to put the same pizza I just saw and formed a desire for on a plate I just retrieved from the shelf (although I could have been fooled); I know how move so that the seen pizza will be the eaten pizza.

The way familiar and basic ways of acting work, can only be understood against the background of familiar roles that objects play in our lives, and how we can, in virtue of the way our bodies work, the way environments are laid out, and the way artifacts are designed, count on them being nested and linked. When I type I know that the key pressed will affect the screen seen; when I drink I know that the glass seen will be the glass grasped; that the liquid in the glass that is grasped will be the liquid that ends up in my stomach.

## 4 Roles in Action

Acts (particulars) involve agents at times and locations moving their bodies and limbs in various ways. Actions (types) can be individuated in terms of the types of movements ('executions'), or the results the movements have in circumstances ('accomplishments'). We use the locutions 'by' and 'way of' to get at the various relations. Moving ones right forefinger downward is an action: a type of movement. Making an 'h' appear on the screen is an action, an

accomplishment. One way of making an ‘h’ appear on the screen is moving one’s forefinger down in the circumstance in which one’s forefinger is perched over the ‘h’ key of a properly functioning keyboard attached in the right way to a properly functioning computer. That is the way I just used; I made the ‘h’ appear *by* moving my forefinger. There are other ways of doing the same thing. In different circumstances I could have moved my middle-finger, or hit the ‘h’ key with a pencil, or said “Horatio” into the microphone of my voice-recognition system.

Movements affect — act upon — objects that play certain roles in the agent’s life at the moment of action: the key over which his forefinger is perched; the bike to which the brake attached to the cable attached to the lever he is grasping is attached, and so forth. The results of the action depend on the properties of the object one acts upon. Moving your forefinger and thereby poking an ‘h’ key attached to a computer has a quite different effect than moving your and thereby pushing a button that sets off a bomb.

So, intelligent action means moving in ways that take account of which object the movement acts upon, and its further properties; the role it plays in your life, and what properties it has.

## 5 Roles in Communication

We will focus on one fairly common communicative situation. The speaker has a bit of information about some object X; that X if F. X plays a role in the hearer’s life, that puts him a position to act upon X in a helpful or useful way, and he would do so if he had the information that X if F in an appropriate form. So the speakers job is to get it to him in that form.

So the speaker creates an utterance; he refers to X, and predicates being F of X. The utterance plays two roles; it is created by the speaker, and perceived by the hearer. And it creates two roles: being the object referred by the speaker of the utterance, and being the object of which F-ness is predicated.

These roles are liked by the syntax of the sentence. The speaker has an

additional linking project, however. He has to get the role of being the object referred to linked to the action-affording role the object is playing in the hearer's life.

To do this the speaker provides additional role-coordinating information. In the case of indexicals and demonstratives, this amounts to identifying a role that the object plays in the speaker's life, such that the hearer can identify the occupant as playing the relevant action-affording role in his own life.

When I say, "I'd like the salt", I identify an object that plays a certain role in my life (the role of self; that is, being the person I am identical with) and predicates a further property of that object (wanting the salt). I say it to you, across the table from me. I thereby create an object (my utterance) that plays a certain role in your life (you hear it). I thereby create a nested role that I play in your life: the speaker of the utterance you hear. I assume you will be able to link this role with another one I already play: 'the person sitting across from me'.

Since you know the meaning of 'I' and the way English syntax works, you know that the speaker of the utterance is the person who, if it is true, wants some salt. So you learn that the person sitting across from you would like the salt. You know how to pass the salt to the person sitting across from you, so you pass it to me. If you are an agreeable sort of person, you pass it to me.

Indexicals are devices of role-coordination. The speaker identifies an object by a role it plays in his life, and then enables the hearer to identify the object by the role it plays in his life. Indexicals are appropriate, when the initial state of the hearer is such that knowing the role the object plays in the life of the speaker, will enable him to know the role it plays in his own life.

## **6 Establishing Reference versus Providing Information about Reference**

An assumption of the traditional treatment of reference is that the job of the indexical or name is to establish reference. We modify that assumption. The

job of a name or indexical is rather to enable role-based identification of the referent.

On our view, referring is easy. The speaker needs to have an object in mind, about which he intends to say something; typically, but not always, in order to communicate information (or misinformation) to a hearer. This point can be made in terms of what we call an ‘unhelpful pronoun’.

You have been thinking about the world economic crisis, while everyone else is talking about football. Suddenly you burst out, ‘He is an idiot’. The ‘he’ is an unhelpful pronoun; no one has an idea to whom you are referring. The pronoun is completely unhelpful. Still, you have referred; your statement is true if the person you have in mind, of whom you intend to predicate the property of being an idiot, is an idiot.

Even in this case, an additional link is provided. The logical subject of your statement is the person that you intend to refer to. But you have not provided any help in identifying that person, as you would have by using an indexical or a demonstrative or a name.

If you attempt to provide information, you take a risk of getting it wrong. Suppose you think that Bush is an idiot, and he is whom you had in mind. You think that the man we all see on the television screen is Bush, so you say, “That man is an idiot”. But it isn’t Bush, but a Bush-impersonator. So you don’t refer to the person you intended to refer to, and don’t say what you intended to say. Your plan was to refer to the person you intended to refer to, Bush, by referring to the man you saw. You thought that one man played both roles, but you were wrong. When the speaker’s plan works, the name or indexical will not establish reference, but provide an additional role played by the object to which reference has already been established.

## 7 Names as Role Coordination Devices

Now consider a different scenario. The famous actress Julia Roberts sits at our table. I see she is looking around the table, presumably for the salt. You are

well positioned to reach the salt and pass it to her; she sits directly across from you. I tell you, “Julia Roberts would like the salt”. What do roles have to do with this?

Consider any sentence of the form, ‘X is so and so’, where X is a singular term. The syntax of the sentence imposes a link between utterance relative roles: the person or object the speaker is designating, and the person or object about whom the speaker is predicating something; we can call the combined role ‘the logical subject’. The particular term ‘X’ will impose further links, if it is an indexical or a demonstratives. If the sentence is ‘I am so and so’, the logical subject will also be the speaker; if it is ‘you are so and so’, the logical subject will also be the addressee, and so forth.

Names are also a way of providing such information. When I say ‘Julia Roberts wants the salt,’ you learn that the person I intend to refer to bears the name ‘Julia Roberts’.

Here the background situation is quite different than in the case where an indexical might be used. Everyone at our dinner party knows that the beautiful actress seated at our table is named ‘Julia Roberts’. Of course she is not the only one; there are probably hundreds of people named Julia Roberts living in the United States alone. Still, in the situation, common sense and the added information that the intended logical subject is named ‘Julia Roberts’ will enable my hearers to identify the person I am talking about in a manner that is linked to various roles she is playing in their lives, viz, the person they see sitting near them, and, in the case of those sitting near her, the person they can pass the salt to.

So a name, like an indexical, provides supplemental information that enables hearers to link the role of being speaker’s intended logical subject with various roles people are playing in their lives. Although names are not, like indexicals, associated by meaning with utterance-relative roles, they never the less provide tools with which speaker can coordinate roles.

So here my plan is as follows. My goal is to get you to pass the salt to the person sitting across from you. I assume you have the ability to pass the salt

to the person across from you, and will do so if you know she wants it. So, my subgoal, get you to believe the person sitting across from you wants the salt. I assume know recognize her, and know her name is Julia Roberts. So, it will suffice to get you to believe that Julia Roberts wants the salt.

When I utter, “Julia Roberts wants the salt,” I will create the roles of being the person referred to by the speaker of that utterance, and being the person the speaker asserts to want the salt; the syntax of my sentence links the roles. By using the name ‘Julia Roberts’ I provide additional information about the role occupant, that allows you to identify her. Now you realize that one person occupies the roles of being the person asserted to want some salt, and being the person across from you.

The name serves as a role coordination device; it provides the incremental information necessary to link the roles of being the person across from you and being the person of whom wanting the salt is asserted.

## 8 Pure Communication

Of course, often we communicate not with the goal of enabling a specific action, like passing the salt to someone who wants it, but simply to modify beliefs. I say, “Julia Roberts won an academy award.” My goal is imply to change or reinforce your beliefs.

Here I assume that Julia Roberts already plays a role in your life. I assume that you have an idea or notion of Julia Roberts, an idea picked up by meeting her, or, more likely, seeing her in movies and perhaps reading and talking about her. My plan is that you will add the information, ‘has won an academy award’ to your Julia-Roberts notion. To do this, you need to link the role of being the person who is the source of your notion, and the role of being the person who is the referent of my utterance. My utterance creates a new role for Julia Roberts to play: being the person I am referring to. I assume that by using her name, I provide information that will allow you to link the roles ‘being the person referred to by the use of the name ‘Julia Roberts’ in the utterance I am

hearing' and 'being the person I think about with notion  $n$ ', where  $n$  is your Julia Roberts notion.

In simple transmission of information about individuals, the speaker has a plan to get the hearer to think about the same individual he is thinking about. Our hypothesis is that names and indexicals are suited, by their meanings, to bring this about in different common cognitive situations.

In a paradigm case of communicating information about an individual, the speaker has a plan. It will be a plan for getting the hearer to believe a proposition about the individual in a certain way (or a constrained set of ways)—that is by a role or roles that the person plays in the hearer's life.

Suppose you meet Elwood the philosopher at a cocktail party. You are talking about world events, cognitive science, and other subjects in a way that presupposed that your interlocutor is knowledgeable. In order to convey that he really doesn't know much about any of this, Elwood says, "I am just a philosopher". You learn that the person you are talking to is just a philosopher, and move to simpler (but more profound) topics.

If Elwood had said, "Elwood is a philosopher," that wouldn't have achieved his purpose, since you don't know his name yet. The indexical 'I' was the appropriate role-linking device.

Suppose on the other hand you and Elwood are discussing the works of Francois Recanati. Recanati, whom you haven't met, happens to be at the party, over by the bar collecting yet another drink. Elwood says, "Recanati's earliest work was on performatives". His intention is to have an affect on your Recanati-notion; to get the role of being the source of that notion linked to being the person he is talking about. If he had pointed to Recanati, and said, "That man's earliest work was on performatives," he wouldn't have succeeded. You would have linked the role, 'being the man Elwood is talking about' with the role, 'being the man I see at the bar'.

In the simple case of introducing oneself, the different role-linking strategies are both involved. Elwood says, 'I am Elwood'. What you learn is that the man you are talking to is named 'Elwood'. You link the roles of being the speaker

and being the man the speaker is referring to in virtue of the meaning of ‘I’. You are aware that a condition for referring to a person with the name ‘Elwood’ is that the person have the name ‘Elwood’. So you learn that Elwood’s name is Elwood. It wouldn’t have worked for him to say ‘I am I’ or ‘Elwood is Elwood’.

## 9 Roles, Descriptions and Anaphora

Definite descriptions are also devices of role-coordination. Descriptions, like names, do not (or at least need not) disclose a role the referent plays in the life of the speaker. But they provide the incremental information necessary to the hearer to link the object that plays the role of being referred to by the speaker, with roles the object does or may play in the hearer’s life.

The situation is as before; I see Julia Roberts looking at the distant salt shaker; you are sitting across from her, and can reach the salt shaker. I am not much of a film fan, and I don’t know the name ‘Julia Roberts’. But I am aware that the lady sitting across from you is a movie star. So I say, “The movie star would like some salt.”

This is an instance of what is sometimes called an ‘incomplete definite description’. There are lots of movie stars, so how can ‘the movie star’ pick out just one of them? If we think of the job of the description as providing incremental information, there is no problem. My hearer understands what is going on; what the overall point of my utterance is to get him to pass the salt to someone. Presumably it is someone whom I can see wants the salt and someone to whom he can pass the salt. The description is appropriate because there is only one movie star who is a candidate. The job of the description is to provide the additional information about the person I refer to, that will enable you to identify her, in terms of the role she plays in your life; being the person sitting across from you, to whom you can pass the salt.

A description might do its role-linking job, even though it does not denote the object referred to. In the uses we are thinking about, the definite description doesn’t secure reference; that is done by the speaker’s intentions. A description

may be inaccurate, but still suffice to make the speaker's intentions clear.

Suppose that I say to you: "the best turn of the century actress wants the salt." You whisper "She's definitely not the best, but I'll pass her the salt." Let's assume that you are right; in fact Juliette Binoche is the best turn of the century actress, not Julia Roberts. So my description denoted Juliette Bioche. Nevertheless, I referred to Julia Roberts. The error I made was not referring to the wrong person, but providing inaccurate information about her to assist you in interpreting my intentions. But, even with the inaccurate information, you were able to do so.

In your reply, you use the pronouns 'she' and 'her,' anaphorically, to refer to Julia Roberts. I opened an anaphoric chain with my inaccurate description. Anaphors created linked roles, and the speaker provides just the information necessary to sort out which anaphoric chain she continues.

## 10 Conclusion

The paradigm of singular terms as role-coordinating devices suggests the following framework:

1. Statements express propositions. But we shouldn't assume that the proposition expressed is the only proposition associated with an statement.
2. Even if we accept that statements containing indexicals and names express *singular* propositions —with the individuals designated as constituents— while statements containing descriptions express *general* propositions — with identifying conditions as constituents—, there are other contents involved classifiable by other propositions. They may be about the role played by the individual or some other content that constitute the *operative* content of the statement.
3. Singular terms are role-coordinating devices. They don't establish reference but they provide information about the object referred to, that

enables the hearer to link the role of being the object referred with various roles in his own life.

4. In the case of indexicals, the incremental information is a further role the referent plays in the speaker's life, such as being the speaker himself ('I'), the person the speaker addresses, and so on. Indexicals are appropriate when the hearer will realize that the object that plays this role in the speaker's life plays a role in his life.
5. Names and descriptions are not (necessarily) associated by their meaning with speaker-relative roles, but they provide incremental information that allows role-coordination.
6. The individual referred to by the use of a definite description do not always coincide with the individual denoted by it. The speaker can achieve successful reference, opening the chain for subsequent anaphoric references, even when he misdescribes the individual referred to.

In our view, this new paradigm of reference is faithful to the view of language as action, inherited from the work of Wittgenstein, Austin, and Grice, providing a coherent picture of how the parts of language study concerning reference fit together within a larger picture of human thought and action.

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